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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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26 WEST 61ST STREET
NEW YORK, NY 10023

EXAMINER

SCHWARTZ, JORDAN MARC

ART UNIT	PAPER NUMBER
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2873

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/521,127

Applicant(s)

GAL ET AL.

Examiner

Jordan M. Schwartz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-13, 15-19 and 21 is/are rejected.
- 7) ☒ Claim(s) 8, 9, 14, 20 and 22-24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 January 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. PCT/IL03/00558.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/05, 12/05, 5/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION***Priority***

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent application PCT/IL03/00558, filed on July 3, 2003.

Information Disclosure Statement

For applicant's information, two references cited on the IDS of December 7, 2005 were crossed out because these references are duplicative of references already cited on the IDS of January 11, 2005.

Claim Objections

Claim 6 is objected to because of the following informality: the claim ends in two periods. Appropriate correction is required.

Claim 24 is objected to for the following reason. Since the intended meaning could be determined from the specification and the Figures, a 112 rejection was not made but instead this lack of clarity issue is being raised in the following claim objection.

In claim 24, line 3, claiming "an axi-symmetric lens, capable of reflecting..." creates a lack of clarity. Specifically, a lens will provide light refraction and not light reflection. From what is disclosed in the specification and Figures, the assumed meaning is "an axi-symmetric lens, capable of refracting...".

Claim Rejections - 35 USC § 102

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The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by

Driscoll Jr et al publication number 2004/0008423.

Driscoll discloses the limitations therein including the following: a wide angle imaging assembly (abstract, Figure 1C, 1D re the panoramic lens); comprising a main lens produced from an aspherical optical block (paragraphs 0041 and 0042 re aspherical surfaces and formed by molding so therefore “produced from an aspherical optical block”); comprising a transparent upper surface (Figure 1C, paragraph 0042 the upper surface of panoramic lens “101”); at least part of which is capable of reflecting rays that impinge from the inner side (Figure 1C, the reflective part of the upper surface); a transparent perimeter surface (Figure 1C, the side perimeter surface from which the light rays are entering); a transparent lower surface (Figure 1C, the portion of the lower surface from which the light rays exit the lens); light originating from a first scene having a 360 degree panoramic perimeter (Figures 1C and 1D); are refracted by the perimeter surface, enter the block, are reflected by the upper surface towards the

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lower surface and are then refracted by the lower surface and exit (Figure 1C); the upper surface at least partially coated with reflective material on its exterior side (paragraph 0042). The lens material and reflective coating material will inherently be selected to transmit and reflect light in a specific spectral range, such as "visible light" this being reasonably based upon Driscoll disclosing the panoramic lens being used for video conferencing (paragraphs 0006 and 0011).

Claims 1-7, 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Charles patent number 6,449,103.

Charles discloses the limitations therein including the following: a wide angle imaging assembly (abstract); comprising a main lens produced from an aspherical optical block (column 13, lines 12-17, column 26, line 67, column 39, line 34 re aspherical surfaces and formed by molding so therefore "produced from an aspherical optical block"); comprising a transparent upper surface (see Figures such as Figure 65, column 3, lines 25-45); at least part of which is capable of reflecting rays that impinge from the inner side (see figures such as Figure 65); a transparent perimeter surface (see figures such as Figure 65); a transparent lower surface (see figures such as Figure 65); light originating from a first scene having a 360 degree panoramic perimeter (abstract, see Figures such as Figure 65); are refracted by the perimeter surface, enter the block, are reflected by the upper surface towards the lower surface and are then refracted by the lower surface and exit (see figures such as Figures 65); the upper surface at least partially coated with reflective material on its exterior side (column 3, lines 25-45). The lens material and reflective coating material will inherently be

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selected to transmit and reflect light in a specific spectral range, such as "visible light" this being reasonably based upon Charles disclosing the panoramic lens being used for film cameras or surveillance systems (column 1, lines 15-40).

Charles further discloses the assembly comprising a transparent area in the upper part enabling light from a second scene located at least partially above the first scene to pass through the transparent area, travel through the block and exit (see Figures such as Figures 73, 75, 86, 93, 139); a curvature of the transparent area different from that of the remainder area of the lens (see Figures such as Figures 105, 139); the lower surface described by two different axi-symmetric curves (See Figures such as Figures 73, 75, 83, 86, 139); the transparent area fabricated as a hole (see figures such as Figures 93, 105, 139, 157); a plurality of optical components within the hole to enhance light from the second scene (see Figures such as Figures 93, 105, 124, 157); a plurality of optical lenses above the transparent area to enhance light from the second scene (see Figures such as Figures 75, 86, 93, 139).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-5, 7, 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallerstein patent number 6,885,509 in view of Driscoll Jr et al publication number 2004/0008423.

With respect to independent claim 1, Wallerstein discloses the limitations therein including the following: a wide angle imaging assembly (Figures 1-3, column 1, lines 22-52, column 2, lines 37-54); comprising a main lens (Figures 1-3, the main lens "18"); comprising a transparent upper surface (Figures 1-3, column 2, line 58 to column 3, line 7, the upper outermost portion and upper central portion as the "transparent upper surface"); at least part of which is capable of reflecting rays that impinge from the inner side (Figures 1-3, the surface covered with reflective material "30"); a transparent perimeter surface (Figures 1-3, convex outer surface "26") a transparent lower surface (Figures 1-3, the lowermost surface portion at which the light rays exit); light originating from a first scene having a 360 degree panoramic perimeter (Figures 1-3, column 1, lines 22-52, column 2, lines 37-54); are refracted by the perimeter surface, enter the block, are reflected by the upper surface towards the lower surface and are then refracted by the lower surface and exit (Figures 1-3). The lens material and reflective coating material will inherently be selected to transmit and reflect light in a specific spectral range, such as "visible light" this being reasonably based upon Wallerstein disclosing the panoramic lens for use in observing a 360 degree surrounding panoramic scene (column 1, lines 22-52).

Wallerstein discloses as is set forth above but does not disclose the main lens "produced from an aspheric optical block". Driscoll teaches that in using a

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panoramic lens for viewing a 360 degree surrounding panoramic scene (Figures 1C and 1D, paragraph 0043) that it is desirable to have the lens formed from an aspheric optical block for the purpose of providing a higher degree of resolution near the lens horizon (paragraphs 0012, 0042-0043). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the lens of Wallerstein as being formed from an aspherical optical block since Driscoll teaches of the desirability of using an aspherical optical block for the purpose of providing a lens of increased resolution.

Wallerstein and Driscoll disclose and teach as is set forth above and Wallerstein further discloses the upper surface at least partially coated with reflective material (column 2, line 58 to column 3, line 6); further comprising a transparent area in the upper part enabling light from a second scene located at least partially above the first scene to pass through the transparent area, travel through the block and exit (Figure 3 re light rays entering lens "66" as the second scene); a curvature of the transparent area different from that of the remainder area of the lens (Figure 3 re the central transparent part different from the outer portion of the upper surface); the transparent area fabricated as a hole (Figure 3, the "hole portion" in which lenses "72" and "70" lie); a plurality of optical components within the hole to enhance light from the second scene (Figure 3, lenses "72" and "70", column 5, line 38 to column 6, line 6); a plurality of optical lenses above the transparent area to enhance light from the second scene (Figure 3, lenses "66" to "72", column 5, line 38 to column 6, line 6).

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Claims 15-19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallerstein patent number 6,885,509 in view of Driscoll Jr et al publication number 2004/0008423 and further in view of Doi publication number 2003/0099045.

Wallerstein and Driscoll Jr disclose and teach as set forth above and Wallerstein further discloses a holding element extending downward and not interfering with light rays exiting the lower surface (Figure 3, holding element "12") and the holder connected to an image capture device (Figure 6) but does not specifically disclose the holder adjacent the lower surface, shaped like a tube, optically transparent, coaxial with the optical block and optical lenses to enhance the quality of image exiting the block. Doi teaches that in a panoramic image lens having light refracted and reflected similar to that of Wallerstein (Doi, Figure 1) that it is desirable to have a holder adjacent to the lower surface, shaped like a tube, having an optically transparent material, coaxial with the optical block, and optical lenses to enhance the quality of image exiting the block for the purpose of connecting the optical block to an image sensor without interfering with the rays exiting the lower surface (Figure 1, holder "10", lenses "6", image capture device "7" and "8" paragraphs 0004-0005). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the holder of Wallerstein as further having the features set forth above since Doi teaches that in a panoramic image lens having light refracted and reflected similar to that of Wallerstein (Doi, Figure 1) that it is desirable to have a holder with these features for the purpose of connecting the

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optical block to an image sensor without interfering with the rays exiting the lower surface. With respect to the claimed holding element as “fabricated together with and part of the optical block” it has been held that the use of a one piece construction instead of the structure disclosed in the prior art would be merely a matter of obvious engineering choice. In *Re Larson*, 340 F 2d 965, 968, 144 USPQ 347, 349 (CCPA 1965). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the holding element as fabricated together with and part of the optical block, i.e. “integrally formed” since it has been held that the use of a one piece construction instead of the structure disclosed in the prior art would be merely a matter of obvious engineering choice. The connector taught by Doi will inherently have a mechanical connector with a first edge connecting to the holding element since the system of Figure 1 will inherently need a connecting piece to connect the holder “1” to the imaging device “8”).

Prior Art Citations

Wallerstein et al publication number 2004/0008407, Powell patent number 5,473,474 and Greguss patent number 4,566,763 are being cited herein to show wide angle imaging lens assemblies that would have read on or made obvious a number of the above rejected claims, however, such rejections would have been repetitive.

Wallerstein publication number 2002/0154417 is being cited herein to show a wide angle imaging lens assembly that would have made obvious a

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number of the above rejected claims, however such rejections would have been repetitive.

Allowable Subject Matter

Claims 8-9, 14, 20, and 22-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims (and claim 24 overcoming the claim objection set forth above).

The following is a statement of reasons for the indication of allowable subject matter: with respect to the allowable subject matter, none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103. Specifically, with reference to claims 8-9, none of the prior art either alone or in combination, disclose or teach of the claimed wide angle imaging lens assembly specifically including, as the distinguishing features in combination with the other limitations, the light from the second scene passing through the optical block as claimed, and the transparent area fabricated as a hole extending along the vertical axis of symmetry from the upper surface to the lower surface. Specifically, with reference to claim 14, none of the prior art either alone or in combination, disclose or teach of the claimed wide angle imaging lens assembly specifically including, as the distinguishing features in combination with the other limitations, a hole conically shaped extending from the upper surface to the lower surface and a black cone compatibly placed with the hole to prevent glare. Specifically, with reference to claims 20, 22, and 23, none of the prior art either alone or in

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combination, disclose or teach of the claimed wide angle imaging lens assembly specifically including, as the distinguishing features in combination with the other limitations, the holding element fabricated together with and part of the optical block adjacent the lower surface and extending downward, not interfering with the rays exiting the lower surface, a mechanical connector to connect to the holding element, and a second edge of the connector designed to connect to an illumination source with the illumination source positioned adjacent to the exterior edge of the holding element. Specifically, with reference to claim 24, none of the prior art either alone or in combination, disclose or teach of the claimed wide angle imaging lens assembly specifically including, as the distinguishing features in combination with the other limitations, the hole extending along the vertical axis of symmetry of the optical block with an optical assembly within the hole having the specific structure as claimed and the optical assembly not interfering with light rays reflected from the optical block.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan M. Schwartz whose telephone number is (571) 272-2337. The examiner can normally be reached on Monday to Friday (8:30 to 4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached at (571) 272-2333. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'J. Schwartz', with a stylized flourish at the end.

Jordan M. Schwartz
Primary Examiner
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January 16, 2007